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**REMARKS**

This amendment is submitted in response to the office action of 5 December 2005 which considered all of pending claims 1 - 20; rejected independent claims 1,2 and 19 as well as dependent claims 3-5,10, and 11 under 35 U.S.C. 102(e). This office action also rejected dependent claims 6-9, 12-18 and 20 under 35 U.S.C. 103(a). The present amendment revises claims 1-3,6,8,9,13,14, and 16-20; and submits claims all claims (1-20) for reconsideration.

As per **Drawings 2.** on page 2 of the office action, the requested drawing changes have been made. Attached is a replacement drawing.

As per **Drawings 3.** on page 2 of the office action, the specification has been amended to correct the alleged deficiencies.

As per **Claim Objections.** on page 3 of the office action, claims 3,13, and 16 have been revised.

Independent claims 1,2,19 have been revised to improve the characterization of the invention.

**Response to the 35 U.S.C. 102(e) rejections.**

As per paragraphs 12-20 of the office action, the rejection of claims 1-5, 10,11 and 19 as anticipated by Ferguson et al (US 6,798,777) (hereinafter Ferguson) is respectfully traversed. Ferguson discloses a system that employs linked list processing of packets received on an input port, for processing the received packets to extend the received packets from an input port to an output port of a packet router. Ferguson is directed to the details of a determination of the output port to which the received packets are to be extended. By contrast, the applicant's invention does not disclose or claim how packets received on an input port of a packet router are extended to an output port. Instead, applicant's invention comprises a separate memory storage system that stores packets after they have been received and prior to the time that they are to be applied to an output port of the packet router. Independent claim is 1,2 and 19 have been amended to clarify that the memory storage system of the present invention is not part of a packet router and that it comprises separate memory facilities that temporarily store packets for a packet router.

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The memory storage facilities of the present invention are shown on figures 17 and 18 and are described in the specification beginning on beginning on page 23, line 24. The memory storage facility disclosed on figure 18 provides an efficient high-speed storage for packets received by input port 1817 and which are extended  
5 to output port 1818 of packet router 1811. The sole function of the apparatus of the present invention 18 is to provide storage for the packets received by the router prior to the time they are extended to output port 1818. A packet requiring such storage is transmitted to the apparatus in the lower portion of figure 18 by access  
10 flow regulator 1801. Access flow regulator 1801 is an interface between packet router 1811 and the memories shown on the lower portion of figure 18. These memories comprise the memory storage facility of the present invention. Access flow regulator 1801 determines, under control of processor 1814, when a packet received by packet router 1811 requires storage and applies it over bus 1802 to the state controller's 1804 and their RAM banks 1803.

15 Each state controller 1804 determines whether it's associated RAM bank 1803 is available for storage of a received packet. RAM bank 1803 is a high-speed low capacity memory that stores the head buffer, tail buffer, and at least one intermediate buffer of a received packet on a link list basis. The intermediate buffers are received by a RAM will 1803 but are concurrently transmitted via a  
20 background access multiplexer 1808 to remote rams 1806 which comprise slow speed bulk storage for the intermediate buffers. When the storage of a link list is accomplished by the facilities of figure 18, the head, tail, and at least one intermediate buffer of the link list are stored in the high-speed RAM 1803; the intermediate buffers are stored in bulk memory 1806.

25 Access flow regulator 1801 subsequently determines that a packet stored by the memories of figure 18 is to be retrieved and extended via access flow regulator 1801 to an output port 1818 of the packet router 1811. The retrieval of a stored packet is accomplished by reading out the head and tail of the packet from the high-speed RAM 1803, concurrently reading out the intermediate buffers of the  
30 packet from remote RAM 1806, and by transmitting the retrieved intermediate buffers to the associated high-speed RAM 1803 which forwards the intermediate buffers together with the head and tail buffers to access flow regulator 1801. Access flow regulator 1801 functions as an interface between packet router 1811

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and the memory storage facilities of the present invention and forwards a retrieved packet, under control of processor 1814 to output port 1818.

5 The memory facilities of the present invention are separate from packet router 1811 but are connected to it by means of access flow regulator 1801, which defines an interface. The provision of a common high-speed memory storage facility is advantageous in that it eliminates the need for each input port of packet router 1811, such as port 1817, to be equipped port with memory storage facilities. The provision of a common memory storage facility as provided by the present invention provides for improved efficiency in the temporary storage of received packets.

10 As per paragraphs 12 and 13 of the office action, the examiner's analysis of Ferguson in the rejection of claim 1 is not understood. The examiner's rejections may be moot since independent claim is 1 has been amended to clarify that packet router 1811 and the memory facilities of the present invention of figure 18 are separate entities that are coupled to each other solely by means of the interface comprising access flow regulator 1801. It is respectfully submitted that Ferguson is not a 35 U.S.C. 102 anticipation of these claims as amended. The applicant cannot find any apparatus in Ferguson that provides for the temporary storage of a received packet using the apparatus defined by the applicant's amended claims.

20 If the examiner reapplies Ferguson In the next office action, he is respectfully requested to comply with the all elements rule for 35 U.S.C.103 rejections and indicate with specificity and particularity where each element of the amended rejected claims can be found in Ferguson. Thus, where does Ferguson disclose an access flow regulator 1801 defining an interface between a packet router and a separate memory storage facility? Where does Ferguson disclose high-speed Ram bank memories 1803 together with associated state comptrollers 1804 of an independent memory system? Where does Ferguson disclose background access multiplexer 1808 defining an interface between a packet router and a separate memory system? Where does Ferguson disclose bulk memory, such as 1806, that stores the intermediate buffers of a packet with the head and tail buffers of the packet being stored in an associated high speed RAM bank 1803 of a separate memory system?

30 Claim 1 is directed to the writing of a packet received from the interface comprising access the flow regulator 1801 and applied to the separate memory

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facilities of figure 18. Independent claim 2 differs from claim 1 only in that claim 2 is directed to the retrieval of a stored packet and the application of the retrieved packet to access flow regulator 1801 defining an interface.

The examiner's 35 U.S.C. 102 rejections do not appear to satisfy MPEP.

5 2131, which characterizes the requirements, an anticipatory reference must possess. MPEP 2131 states that a claim is anticipated only if each and every element set forth in the claim is found expressly or inherently in a single prior art reference. MPEP 2131 further states that the identical invention must be shown in as complete detail as in the reference as is contained in the claim. The elements  
10 must be arranged in the office action as required by the claim. Rule 1.83 of 37 C.F.R. states that the drawing must show every feature recited by the claims. The reference disclosure must be understandable and enabling to a person of ordinary skill in the field of the invention. It is the claims that define the invention. And it is the claims, not applicant's specification or the results achieved, that must be  
15 anticipated by a single prior art reference. Ferguson does not meet this requirement since, insofar as it can be understood, is it does not disclose each and every element recited in applicant's claims 1 and 2.

The examiner's comments in support of the 35 U.S.C. 102 rejection of claim 1 do not appear to meet the requirements for anticipation. Amended claim 1 recites  
20 that access flow regulator 1801 defining an interface between packet router 1811 and a separate memory system comprising the high-speed memories 1803 and a bulk member 1806 having a lower data rate than the high-speed memories 1803. The examiner's comments do not indicate what Ferguson element defines an independent memory system having the high-speed memories 1803 and low-speed  
25 bulk memory 1806. Ferguson does not disclose an access flow regulator that functions as an interface between a packet router and, independent memory facilities for providing temporary storage of packets.

The last element of claim 1 requires a transfer of at least one intermediate buffer from high-speed memories 1803 to bulk memory 1806. The examiner's  
30 comments ignore this transfer recitation, which requires that the separate high-speed memory 1803 initially receives all buffers, retains the head and tail buffers and transfers the intermediate buffers to bulk memory 1806. Insofar as the examiner's comments and Ferguson can be understood, it would appear that the head and tail buffer 318 on Ferguson figure 3 receives only the head and tail

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buffers. The notification area 319 appears to be the bulk memory that receives the intermediate buffers from a separate source independent of Ferguson memory 318. Neither the examiner's comments nor Ferguson describe an operation in which buffer 318 receives all buffers of a packet, retains only the head and tail buffers, and transfers intermediate buffers to the Ferguson bulk memory 319. Such a transfer does not appear to be possible insofar as Figure 3 insofar as Ferguson can be understood.

The applicant's claims require that access flow regulator 1801 defining an interface write all buffers of a packet into the high-speed memory 1803 which then transfers the intermediate buffers to the bulk memory 1806. The office action characterizes the Ferguson output request processor 306 as being equivalent to the applicant's access flow regulator 1801, which comprises an interface. This is not possible since the apparatus shown on Ferguson figure 3 comprises is embedded in the input port. This is to be distinguished from applicant's invention in which the access flow rate regulator 1801 is not part of an input port of the packet router and instead, is an interface between packet router 1811 and the separate memory facilities of the present invention. It is also apparent that the Ferguson output request processor 308 transmits the head and tail of a package into the head and tail buffer 318; but it cannot possibly transmit intermediate buffer to Ferguson memory 318 for subsequent transfer to the notification area 319 comprising the Ferguson bulk memory. Neither Ferguson nor the examiner describes how intermediate buffers are entered into Ferguson bulk memory 319. It is quite apparent that the Ferguson bulk memory 319 located at the bottom of figure 3 does not receive intermediate buffers from the head and tail queue buffer 318 at the top of Ferguson FIG. 3 which is clearly described in Ferguson as receiving only the head and tail buffers from output request processor 306.

In view of the above, it is submitted that Ferguson does not anticipate amended claim 1. If the examiner reapplies Ferguson in the next office section, he is respectfully requested to comply with the requirements of MPEP 2131 by characterizing with particularity and specificity where each element of claim 1 can be found in Ferguson.

As per paragraph 14 of the office action, the examiner's rejection of independent claim 2 is respectfully traversed for reasons comparable to those for independent claim 1. Amended claim 1 is directed to a method by which the

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applicant's apparatus executes a write operation into the memory system of figure 18. Claim 2 is directed to the method by which the apparatus of figure 18 retrieves the packet written by the method of claim 1. The examiner's comments supporting the rejection of claim 2 are unpersuasive for the same reasons above characterized

5 for claims 1. If the examiner reapplies Ferguson, he is respectfully requested to indicate the elements of Ferguson that fulfill the last portion of claim 2 which recite the steps of: transferring the intermediate buffers from the bulk memory 1806 to the high-speed memory 1803; reading out the transferred intermediate buffers from the high-speed memory 1803; and transmitting the read-out buffers from the high-

10 speed memory 1803 to the access flow regulator 1801 defining an interface between the separate memory facilities and packet router 1811.

The above description of applicant's figure 18 concerns only the broader details of the applicant's claimed invention. Due to the complexity of the present invention, it is respectfully submitted that the examiner study the present

15 submission beginning with page 23 for a description of figures 17 and 18 and read through the following material including that describing the method of processing read requests as shown on figure 22 and the method of processing write requests on figure 23 as well as a material shown on figure 24 and 25. The examiner's familiarization with this material will enable him to better understand the claimed

20 invention as well as how the claimed invention differs from Ferguson.

As per paragraph 15 of the office action, the rejection of claim 3 is respectfully traversed. Claim 3 recites the step of concurrently processing link list for a plurality of requests from said access flow regulator 1801. The Ferguson requests processors 306 of an input port are not comparable to the applicant's

25 access flow regulator 1801 defining an interface. The examiner's interpretation of claim 3 is not in accordance with the all elements rule for 35 U.S.C. 102 rejections. This rule requires that a reference asserted to be anticipatory must disclose a counterpart of each claim element. It is submitted that a plurality of Ferguson's output flow processors 306, which are provided on a per port basis, do not

30 correspond to applicant's single access flow regulator 1801 defining an interface. Claim 3 is also asserted to be allowable since it is dependent upon amended independent claim 1 which is believed to be allowable.

As per paragraph 16 of the office action, the rejection of claim 4 rejection is traversed. Claim 4 is believed to be allowable because of its dependency upon

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amended independent claim 1. The examiner's application of Ferguson is not understood since nothing in Ferguson corresponds to the elements of amended claim 4.

5 As per paragraph 17 of the office action, of the claim 5 is traversed. Claim 5 should be allowable because of its dependence upon allowable amended independent claim 1. The rejection of claim of 5 is further traversed since there is nothing in column 41, lines 20 –26 of Ferguson to support the examiner's position.

10 As per paragraph 18 of the office action, the rejection of claim 10 is traversed. Claim 10 should be allowable because of its dependence to on allowable amended independent claim 1. The rejection of claim of 10 is further since there is nothing in column 42, lines 9-11 of Ferguson to support the examiner's position.

15 As per paragraph 19 of the office action, the rejection of claim 11 is traversed. Claim 11 should be allowable because of its dependence to on allowable amended independent claim 1. The rejection of claim of 10 is further traversed since there is nothing in column 41, lines 31-35 of Ferguson supporting the examiner's position. The text cited by the examiner does not correspond to the applicant's claim elements with the clarity required by the all elements rule applicable to anticipation rejections.

20 As per paragraph 20 of the office action, independent apparatus claim 19 corresponds to independent claim 1+2. Independent claimed 19 as amended recites a write function plus a read function. In accordance with the all elements rule applicable to anticipation rejections, the rejection of claim 19 must be supported by a detailed analysis comparing all of elements of claim with elements in Ferguson that directly correspondent to the elements of amended claim 19. This  
25 has not been done in the rejection of independent claim 19. It is respectfully requested that, if the examiner reapplies Ferguson as a 35 U.S.C. 102 (a) reference re claim 19, he is requested to comply with C.F.R. 1.83 as well as the requirements of MPEP 2131 and indicate with where all elements of claim 19 are recited are shown and described in Ferguson.

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### **Response to the 35 U.S.C. 103 (a) Rejections**

As per paragraph 23 of the office action, dependent claims 6, 7, 12, 18, and 20 were rejected under 35 U.S.C. 103 (a) over Ferguson in view of Brigati (US

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6,279, 068). This rejection is traversed since these claims are believed to be allowable as being dependent upon an allowable one of amended independent claim (1, 2, and 19). The rejections of these dependent claims are further traversed because the rejection fails to comply with the rules and regulations characterizing 35 U.S.C. 103 obviousness rejections. The examiner's analysis of Ferguson does not set forth all elements corresponding to the elements of applicant's claims. The examiner presented no evidence indicating why one would be motivated to combine Brigati with Ferguson. The Examiner presented in no information indicating how his proposed combination could be supported. The examiner did not indicate what element in Ferguson would require replacement or modification to incorporate Brigati. Ferguson and are complex references and it is respectfully submitted that fairness to the applicant requires that the examiner provides sufficient information regarding is proposed combination to enable the applicant to understand the merits of the rejection and to provide a meaningful response. This would require information indicating what element in Ferguson's needs to be altered modified or replaced by an unidentified element in Brigati. The unsupported assertion that two patents could be combined to reject the applicant's claims conveys no useful information and is unfair to the applicant. The undersigned cannot meaningfully respond to such rejections until the examiner provide information indicating what element of each patent is to be used in the combination and how each such element is to be modified.

As per paragraph 24 of the office action, dependent claims 8 and 16 were rejected under 35 U.S.C. 103 (a) over Ferguson and Brigati in further view of Lee et al US PG Pub 2004/0205305 (hereinafter Lee). This rejection is traversed because these claims are believed to be allowable as being depended upon an allowable one of amended independent claims (1, 2, and 19). The rejections of these the pendant claims are further traversed on the grounds that the examiner's rejection fails to comply with the rules and regulations applicable to 35 U.S.C. 103 obviousness rejections. The examiner's rejections are improper since the examiner produced no evidence of motivation to combine the references. This rejection is further traversed since the examiner's analysis of Ferguson does not consider elements corresponding to the elements of the rejected claims. The examiner presented no evidence indicating why one would be motivated to combine Brigati with Ferguson and Lee. The examiner present in no details indicating how his



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proposed combination could be achieved. He presented no description of what element in Ferguson would require replacement or modification to incorporate Brigati and Lee as he proposes. Ferguson Brigati and Lee are complex references and it is respectfully submitted that fairness to the applicant requires that the examiner provides sufficient information regarding is proposed combination to enable the applicant to understand the merits of the rejection and to provide a meaningful response. This would require information indicating what element in Ferguson's needs to be altered modified or replaced by an unidentified element in Brigati as well as Lee. The unsupported assertion that the patents could be combined to reject the applicant's claims conveys no useful information and is unfair to the applicant.

As per paragraph 25 of the office action, dependent claim is 9, 14, 15, and 17 were rejected under 35 U.S.C. 103 (a) over Ferguson in further view of Milway US 6,470, 428. This rejection is traversed and the claims are believed to be allowable as being depended upon an allowable one of amended independent claim (1, 2, and 19). The rejections of these claims are further traversed on the grounds that the examiner's rejection fails to comply with the rules and regulations applicable to 35 U.S.C. 103 obviousness rejections. The examiner's rejections are improper since the no evidence was produced proving motivation to combine the references. This rejection is further traversed since the examiner's analysis of Ferguson indicates that it does not contain elements corresponding to all elements of the rejected claims. The examiner presented no evidence indicating why one would be motivated to combine Ferguson with Milway. The examiner also presented no evidence indicating how his proposed combination could be achieved. He presented no description of what element in Ferguson would require replacement or modification to incorporate Milway. Ferguson and Milway are complex references and it is respectfully submitted that fairness to the applicant requires that the examiner provides sufficient information regarding is proposed combination to enable the applicant to understand the merits of the rejection and to provide a meaningful response. This would require information indicating what element in Ferguson's needs to be altered modified or replaced by an unidentified element in Milway. The unsupported assertion that the patents could be combined to reject the applicant's claims conveys no useful information and is unfair to the applicant.

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As per paragraph 26 of the office action, dependent claim 13 was rejected under 35 U.S.C. 103 (a) over Ferguson in view of Brigati and in further view of Klikki US 6,868,061 (hereinafter Klikki). This rejection is traversed since the claims are believed to be allowable as being depended upon an allowable one of independent claim (1, 2, and 19). The rejections of these claims are further traversed since the rejection fails to comply with the rules and regulations applicable to 35 U.S.C. 103 obviousness rejections based upon the combining references. The rejections are improper since they contain no evidence of motivation to combine the references. This rejection is further traversed since the examiner's analysis of Ferguson indicates that it does not consider elements corresponding to all elements of the rejected claims. The examiner presented no evidence indicating why one would be motivated to combine Brigati and Klikki with Ferguson. The examiner also presented no evidence indicating how his proposed combination could be achieved. He presented no description of what element in Ferguson would require replacement or modification to incorporate Brigati and Klikki as he proposes.

Ferguson, Brigati and Klikki are complex references and it is respectfully submitted that fairness to the applicant requires that the examiner provides sufficient information regarding his proposed combination to enable the applicant to understand the merits of the rejection and to provide a meaningful response. This would require information indicating what element in Ferguson's needs to be altered modified or replaced by an unidentified element in Brigati as well as Klikki. The unsupported assertion that the patents could be combined to reject the applicant's claims conveys no useful information and is unfair to the applicant.

All of the above discussed 35 U.S.C. 103 (a) rejections were apparently made with no regard for the requirement of evidence supporting a motivation to combine. It appears that the examiner used the PTO search engine to find a collection of patents containing elements corresponding to the claims being examined. Having found a suitable collection of patents, the examiner applied his collection of patents and asserted, asserted that the patents could be combined. He then applied his collection to the rejected claims with no consideration of the necessity of evidence supporting a motivation to combine. The examiner is respectfully requested to set forth with specificity and particular how the references could be combined. This would include a description of what element in Ferguson is

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to be modified or replaced by what element of Briagti and Milway.

It goes without saying that the ability to collect patents whose combined elements correspond to the elements of a claim under examination does not support a 35 U.S.C. 103 (a) obviousness type rejection. Such a rejection

5 additionally requires evidence of motivation to combine to prove a prima facie case of obviousness. A collection of patents does not by itself prove a prima facie case of obviousness. The missing ingredient that must be presented to achieve a prima facie case of obviousness is evidence supporting a motivation to combine. This was not done in the received office action and therefore the 35 U.S.C. 103 (a) rejections  
10 are improper.

All of the examiner's proposed combinations amount to nothing more than unsupported assertions that one or more patents found due in a search **could be combined** followed by the examiner's personal conclusion **that it would be obvious to combine the patents**. The examiner's assertion amounts to the  
15 application of impermissible 20/20 hindsight based upon a knowledge gained by a reading of the applicant's application and the use of this knowledge against the applicant to form the 35 U.S.C. 103(a) rejections.

The examiner is respectfully referred to section 2142 of the MPEP, which addresses the legal concept of prima facie obviousness. It describes what is  
20 required to establish a prima facie case of obviousness. Section 2143.01 discusses the required evidence of motivation to modify references. **This section further states that the prior art must suggest the desirability of combining the references to make the claimed invention obvious.** It states that without evidence of motivation to combine, a rejection based upon obviousness is  
25 improper. It further states that obviousness can only be established by combining references where there is some teaching or suggestion or motivation is found either explicitly or implicitly in the references themselves. In the above office action, the examiner failed to comply with the requirements of the MPEP, which state that **the fact that references can be combined is not sufficient to establish a case of**  
30 **prima facie obviousness.** It further states that the fact that even if the claimed invention is within the capabilities of one skilled in the art, that is **not sufficient by itself without motivation to establish a prima facie case of obviousness.** The examiner is referred to the Above-discussed sections of the MPEP together with

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the case law cited therein for further elaboration on the subject of what is required to establish a prima facie case of obviousness.

In the above identified office action, it would appear that the examiner's examination methodology amounts to the steps of: determining the elements of the claims under examination, using the PTO search engine to identify patents disclosing the claim elements under consideration, and when a collection of patents has been found disclosing all elements of the claims under consideration, to package the patents together, (like choosing parts from the storage bins of a hardware store), and then asserting without further analysis or study that **it would be obvious to one skilled in the art to combine the patents.**

It may be noted that one could argue "anything can be combined with anything". This statement proves nothing since it is obviously true. The statement is also true, but is inapposite when debating patentability. For patentability the test is not what could be combined; the test is the availability of evidence proving a motivation to combine.

By reading section 2142 of the MPEP the examiner will be instructed that an obviousness rejection requires more than a brief session on the PTO search engine to identify a collection of patents whose summation of elements matches all elements of the claims under study. The examiner will also be instructed that the mere fact that two patents could be combined is not sufficient. Also, the fact that it **might be desirable to combine** the patents is not sufficient. The elusive ingredient required to support an obviousness rejection is **evidence of a motivation to combine** the references. Ideally, this evidence of motivation should be found in the references themselves.

In fairness to the applicant, an obviousness rejection proposing the combination of two references should present sufficient information so that the prosecution record is clear as to what the examiner is suggesting. Design level details of the proposed combination are not required. However, more is required than the mere assertion that the patents could be combined. Fairness requires that the examiner provide some information as to how the references are to be modified to achieve the proposed combination. Thus, if two patents were to be combined, fairness would suggest that the examiner indicate what elements of the first patent must be modified or eliminated to achieve the incorporation of an identified element of the second patent into the first patent.

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The 35 U.S.C. 103 (a) rejections of the above-identified dependent claims are respectfully submitted to be improper since each fails to prove evidence of motivation to combine as set forth in the case law in the section **2142 of the MPEP**. If the examiner reapplies combinations of references in the next office action, he is respectfully requested to comply with the requirements of the MPEP and provide evidence of motivation to combine. He is respectfully requested to indicate with specificity and particularity where the evidence of motivation to combine is found in the cited references...

It is respectfully submitted in view of the above that all of the claims remaining in application are allowable over the prior art and such action is respectfully requested.

The undersigned hereby thanks the examiner for the courtesies extended during a brief phone call during the week of 14 Feb. 2006.

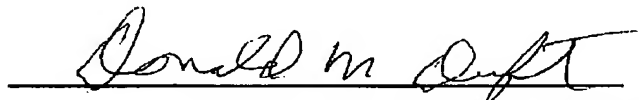
The examiner is respectfully requested to call if the prosecution of the application can be expedited by so doing.

Respectfully submitted,

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Date: 28 Feb 06

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**SIGNATURE OF PRACTITIONER**

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